

What is claimed is:

1. A vessel assembly, comprising:

a vessel having a sidewall defining a cavity containing a fluid;

a valve assembly supported by the sidewall of the vessel and extending

into the cavity of the vessel, the valve assembly, comprising:

a barrel having a wall defining a chamber, the wall having at least one opening; and

a valve member movable between a closed position and an open position wherein when the valve member is positioned in the open position the fluid is permitted to flow into the chamber, and when the valve member is positioned in the closed position fluid is prevented from flowing into the chamber.

2. The vessel assembly of claim 1 wherein the wall of the barrel is provided with an elongated opening.

3. The vessel assembly of claim 2 wherein a closure member is inserted into the elongated opening of the wall of the barrel to permit movement of the valve member between the closed position and the open position.

4. The vessel assembly of claim 1 wherein the valve member includes an inner barrel having a wall defining an opening and in the closed position the at least one opening of the wall of the inner barrel is aligned with the wall of the barrel wherein the barrel is characterized as an outer barrel and wherein in the open position the at least one opening of the wall of the inner barrel is aligned to be in fluid communication with the at least one opening of the wall of the outer barrel.

5. The vessel assembly of claim 4 wherein at least one of the inner barrel and the outer barrel is adapted to rotate relative to the other one of the inner barrel and the outer barrel for moving the valve assembly between the open and closed position.

6. The vessel assembly of claim 1 wherein the wall of the barrel is threaded.

7. The vessel assembly of claim 4 wherein the walls of the inner and outer barrels are defined as sidewalls.

8. The vessel assembly of claim 4 wherein the walls of the inner and outer barrels are defined as end walls.

9. The vessel assembly of claim 4 wherein the wall of the inner barrel is defined as a sidewall and the wall of the outer barrel is defined as an end wall.

10. The vessel assembly of claim 4 wherein the wall of the inner barrel is defined as an end wall and the wall of the outer barrel is defined as a sidewall.

11. The vessel assembly of claim 4 wherein the inner barrel is threaded to receive a sensor assembly.

12. The vessel assembly of claim 1 wherein the fluid is defined as oil.

13. The vessel assembly of claim 1 wherein the vessel is a transformer housing.

14. The vessel assembly of claim 1 wherein the vessel is defined as a pipe.

15. The vessel assembly of claim 4 wherein an o-ring is positioned between the inner and outer barrels.

16. The vessel assembly of claim 1 wherein the vessel assembly further comprises:

a valve seat defined by an internal shoulder positioned in the chamber of the barrel; and wherein the valve member is positioned in the chamber of the barrel.

17. The vessel assembly of claim 16 wherein the valve member is moved based on insertion of an inner barrel into the chamber of the barrel wherein the barrel is characterized as an outer barrel.

18. A sensor assembly for obtaining sensor readings within a container having a sidewall defining a cavity and containing a fluid, the sensor assembly comprising:

a valve assembly adapted to be supported by the sidewall of the container such that at least a portion of the valve assembly extends into the cavity of the container, the valve assembly, comprising:
a barrel having a wall defining a chamber, the wall having at least one opening; and

a valve member movable between a closed position and an open position wherein when the valve member is positioned in the open position the fluid is permitted to flow into the chamber, and when the valve

member is positioned in the closed position fluid is prevented from flowing into the chamber; and

a sensor for detecting or measuring a physical or chemical property of the fluid, the sensor removably disposed in the chamber of the barrel.

19. A valve assembly, comprising:

a barrel having a wall defining a chamber having at least one opening, the barrel adapted to be supported by a sidewall of a container containing a fluid such that a portion of the wall having the at least one opening extends into the container; and

a valve member movable between a closed position and an open position wherein when the valve member is positioned in the open position the fluid is permitted to flow into the chamber, and when the valve member is positioned in the closed position fluid is prevented from flowing into the chamber.

20. The valve assembly of claim 19, wherein the barrel is characterized as an outer barrel, and wherein the valve member is defined further as an inner barrel disposed within the chamber of the outer barrel, the inner barrel having

a wall defining a chamber, the wall of the inner barrel having at least one opening.

21. The valve assembly of claim 20, wherein the inner barrel is movable between the closed position wherein the at least one opening of the inner barrel is aligned with the sidewall of the outer barrel and the open position wherein the at least one opening of the inner barrel is aligned to be in fluid communication with the at least one opening of the outer barrel.

22. The valve assembly of claim 19 wherein the barrel further comprises:

a valve seat defined by an internal shoulder positioned in the chamber of the barrel; and wherein the valve member is positioned in the chamber of the barrel.

23. The valve assembly of claim 22 wherein the barrel is characterized as an outer barrel, and wherein the valve member is moved based on insertion of an inner barrel into the chamber of the outer barrel.

24. The valve assembly of claim 22, further comprising a bias assembly operably associated with the valve member for biasing the valve member against the valve seat.

25. The valve assembly of claim 24, wherein the bias assembly includes a spring.